

Amendments to the Drawings:

The attached sheet(s) of drawings include changes for Figs. 1, 4 and 5. These sheet(s) which include Figs. 1, 4, and 5 replace the original sheet(s) including Figs. 1, 4 and 5.

In Fig. 1, Reference Numeral 69 has been changed to Reference Numeral 60.

In Fig. 4, Reference Numeral 39 has been changed to reference numeral 45.

In Fig. 5, one of the Reference Numeral 37 has been deleted.

REMARKS

Claims 1-17 are pending in the present application and have been rejected. Claims 1, 3 and 4 have been amended herein; claims 1 and 12-17 have been cancelled herein; and claims 18-22 are newly presented herein.

The drawings have been objected to for various reasons. Attached herewith are replacement sheets for Figs. 1, 4, and 5. In addition, explanations of the changes to the Figures have been presented above. As such, it is respectfully submitted that the drawing objections have been overcome.

Claims 1 and 17 have been objected to due to formalities. The objection to claim 1 is addressed in the claim amendments above. Claim 17 has been cancelled, thus the objection is moot.

Claims 1-6, 10 and 11 have been rejected under 35 U.S.C. 102(b) as being anticipated by Palmer (U.S. Patent No. 4,820,272). The Examiner has taken the position that Palmer discloses a syringe which is capable of being used as an IV flush syringe, comprising, *inter alia*, an anti-reflux means (18) for holding the stopper in a partially deflected position when fluid has been delivered from the chamber and the stopper is in contact with the distal wall.

The device of Palmer is a non-reusable hypodermic syringe. Once the plunger has been inserted into the syringe barrel in the Palmer device, it cannot be removed therefore rendering it is non-reusable. The syringe barrel (13) disclosed in Palmer includes upper and lower engagement zones (17 and 18). The lower engagement zone (18) is provided about one third of the height of the barrel, so that an adequate amount of vaccine may be aspirated into the syringe. (*See* Col. 2, lns. 33-35). If the lower engagement zone is located lower than that, the syringe would not be capable of aspirating medication.

The plunger (12) of Palmer includes a piston (24) made of flexible material and sealing rings (25) to engage the barrel walls. The plunger (12) further includes engagement member (26). Engagement member (26) is provided on the shaft of the plunger rod and cooperates with engagement zones (17 and 18) on the syringe barrel to block the removal of the plunger (24) from the syringe barrel. In operation, the plunger (12) should be inserted into the cylinder or barrel (11) immediately before use. (Col. 2, lns. 58-59). After the engagement member (26) passes over upper engagement zone (17), the plunger cannot be removed from the barrel. (Col. 2, ln. 66-Col. 3, ln. 2). While the engagement member is in between the two engagement zones (17 and 18) the syringe can be filled with vaccine. (Col. 3 lns. 10-13). After the plunger is pushed during injection until "the abutting position i.e. when the cylinder is emptied," the plunger cannot be removed due to the engagement of the engagement member 26 with the lower engagement zone (18). (Col. 3, lns. 25-33). Palmer further discloses that:

If someone wished to misuse the syringe, he could not empty the cylinder and at least one milliliter of precious vaccine would remain therein. In addition to the fact that this can be a loss of vaccine material, the remaining (or residual) vaccine would prevent any kind of re-fill and re-use. (Col. 3, lns. 34-39).

Therefore, the placement of the lower engagement zone 17 of Palmer, is such that the when the engagement member 26 of the plunger rod engages the lower engagement zone 17, the plunger rod is not bottomed out, since Palmer discloses that not all of the vaccine is delivered upon injection. Thus, reflux is not prevented by the device of Palmer. Therefore, Palmer fails to disclose that when the engagement member 26 engages engagement zone 17, the piston is in contact with the distal wall of the barrel, or that the sealing ring 25 are partially deflected.

On the other hand, the present invention, as claimed in amended independent claim 1, requires a barrel including recess. Claim 1 further includes a flexible stopper that forms a fluid tight engagement with the barrel walls and includes a rib. The placement of the recess on the syringe barrel must be such that the rib engages the recess *when* the stopper is in contact with the distal wall to maintain the stopper in a partially deflected position and prevent reflux on fluid into the chamber. Thus, claim 1 cannot be anticipated by Palmer, since Palmer fails to disclose a flexible stopper in fluid tight engagement with a syringe barrel, the stopper including a rib which cooperates with the annular recess to deflect the stopper when in contact with the distal wall of the barrel to prevent reflux. Rather, as discussed above, Palmer discloses an engagement member located on the shaft of plunger rod, separate from the flexible piston forming the fluid tight seal. Moreover, the engagement member engages the lower engagement zone of the barrel when the sealing ring is not in contact with the distal wall of the barrel.

Similarly, amended independent claim 4 requires a flexible stopper slidably positioned in fluid-tight engagement with the inside surface of the barrel. Claim 4 further claims a contact area which has a higher coefficient of friction than the inside surface of the rest of the syringe barrel. Again, when the flexible stopper engages the contact area, this engagement holds the stopper in a partially deflected position to prevent reflux of the fluid back into the chamber after fluid has been delivered from said chamber. Again, Palmer does not discloses these elements.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” M.P.E.P. §2129 (quoting *Verdegall Bros. v. Union Oil CO. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053(Fed. Cir. 1987)). Since Palmer fails to disclose a flexible stopper including a rib engaging a to hold the stopper in a deflected position at the distal end of the syringe barrel to prevent reflux. Nor does Palmer disclose a contact area and a flexible stopper engaging that contact areas to hold the stopper in a partially deflected position against the distal end of the barrel to prevent reflux. Since Palmer fails to disclose each element of independent claims 1 and 4, it is respectfully submitted that the 102(b) rejection should be withdrawn. Moreover, remaining claims 3-11 and 18-22 all depend either directly or indirectly from independent claims 1 and 4 which are both believed to be allowable for at least the reasons set forth above. As such, it is respectfully submitted that all the remaining rejections with respect to these claims should be withdrawn as well.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone applicant's attorney at (201) 847-6797 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 02-1666 therefor.

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Respectfully submitted,

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Attachments

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